

## عنوان مقاله:

Box-Behnken Design of Experiments Investigation for Adsorption of Cd<sup>2+</sup> onto carboxymethyl Chitosan Magnetic Nanoparticles

## محل انتشار:

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## خلاصه مقاله:

The main objective of the present study is to investigate the feasibility of using Carboxymethyl chitosan magnetic nanoparticles (CCMN) for the adsorption of Cd<sup>2+</sup>. The study also reports important parameters, which affect the adsorption process, i.e., pH, adsorbent dose, contact time and concentration of Cd<sup>2+</sup>, using Box-Behnken designs. Firstly, functional carboxymethyl chitosan magnetic nanoparticles (about 33 nm) was prepared by chemical coprecipitating and characterized by means of scanning electron microscope (SEM), X-ray diffraction (XRD), Fourier Transform infrared spectroscopy (FTIR). Then, CCMN was used as the adsorbent for the treatment of effluent. The ANOVA result of the full model shows that pH, adsorbent dosage and metal concentration had a significant effect on metal removal. In addition, this parameters indicates which contact time variable does not have a significant effect .((p>0.05

## کلمات کلیدی:

+experimental design; nano magnetic; carboxymethyl chitosan; Cd<sup>2+</sup>

## لینک ثابت مقاله در پایگاه سیویلیکا:

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